

REMARKS

This amendment is in response to the Examiner's Office Action dated 10/22/2002.

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow.

STATUS OF CLAIMS

Claims 1-36 are pending.

Claims 1, 2, and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wang et al., USP 5,661,476.

Claims 15-19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kaehler, USP 5,128,672.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Acevedo, USP 5,818,361.

Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Abraham, USP 5,841,374.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Moon, USP 5,812,117.

Claims 8-13, 30, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaehler.

Claim 14 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaehler in view of Wang.

Claims 20-29, 31, and 33-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Macor, USP 5,841,849, in view of Kaehler.

Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaehler in view of Lo, USP 6,072,471.

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention is an electronic device that is small enough for a user to carry comprising a keyboard input aligned in a single row to provide an efficient key layout that allows a user to quickly and comfortably input characters. Input characters are provided as rows that are taken as subsets of a larger set. An additional set of keys (control keys) allows the user to change the row of input keys from a first subset to a second subset by actuating a key with, for example, the thumbs. The input keys or additional (control) keys may be placed on the side of the device to allow for a larger display.

Specifically, the presently claimed invention is a portable computing/electronic device comprising a reduced set of keyboard/character function keys. The device may be used as a personal digital assistant. A first set of keys is provided as character entry keys, and a second set of keys are provided as control buttons. In the first set of keys each key position corresponds to one character out of a set of selected characters. Using the second set of keys (control keys), the user selects which set of characters the first keys will represent, as well as other functions such as shifting between upper and lower case characters and alpha-numeric control. In the preferred embodiment, the first set of keys is actuated by a user's fingers and the second set by a user's thumbs. Generally, character key positions are provided to correspond to the symbols of a row of a traditional QWERTY keyboard. The second set of keys (control keys) may be used to select which row of the traditional QWERTY keyboard is associated with the character key positions, as well as other control functions such as capitalization. The selected characters are shown on a display on the electronic/computing device in order to provide visual feedback. Alternatively,

the character key positions are implemented by replacing the physical input keys with LCD displays and pressure sensors located in the corresponding key locations. The characters associated with the character entry keys are displayed directly on the corresponding key positions. An additional embodiment places the entire keyboard on the side of the display allowing for the entire top surface of the device to be utilized for display.

In a further embodiment, the electronic device is a wristwatch. The keyboard is provided as a flexible assembly with a row of character keys and control keys on the top surface and is in a pivotal relationship to the watch display. The flexible assembly is stored along and underneath the band of the wrist watch. During use, the assembly is pivoted out from under the band and laid across the user's hand (perpendicular to the band) to actuate the character/control keys, and a display provides visual feedback of the selected row and typed input. Alternatively, two flex assemblies are utilized and when the watch is placed on a surface, the user is able to utilize both hands for input.

Further, an additional embodiment includes the electronic device as a portable phone, such as a cellular phone. Similar to the wristwatch embodiment, members having character and control keys are provided in a rotational relationship with the phone. Preferably the members are permanently attached to the phone and rotate outwards in a manner similar to the assembly of the wristwatch (perpendicular to the length of the phone). A user inputs using one hand when a single member is provided or both hands when two members are provided. In another embodiment, however, the members may be provided as externally attachable device.

In a further embodiment, the electronic device is a portable phone, such as a cellular phone, having the character keys and control keys implemented thereon (as part of the device) rather than being permanently attached members or externally attachable. Preferably the character entry keys are placed on one side of the phone and the control keys are placed on the

opposite side thereof, however, other modes can be utilized. Character input is performed by the user's fingers while the control input is actuated by a user's thumbs. Ideally, the display of the phone is rotated 90 degrees from its normal lengthwise position to allow the user to correct orientation of the display. Additionally, switchable, left or right handed modes can be utilized where the function of the keys, i.e., character or control, switch sides depending upon the mode.

REJECTIONS UNDER 35 U.S.C. § 102(b)

The examiner has rejected claims 1, 2, and 6 under 35 U.S.C. § 102(b) as being anticipated by USP 5,661,476 (Wang et al.), hereafter Wang. Wang discusses a personal information device that uses an M-keyboard and divides the M keys into a first key group and a second key group. Each symbol recognized from the input keystrokes is associated with a two-keystroke sequence in which the first key and second key of that two-keystroke sequence are selected from different key groups. Two stroke sequences received from the keyboard are matched to the symbol assignments to derive the symbol selected. A display is provided to display the characters of a selected row as well as previously input characters.

Wang does not anticipate a reduced set character entry system as disclosed in the present invention. Wang displays a complete set of characters from a QWERTY style keyboard, i.e. a matrix of vertical rows and horizontal rows displaying the entire set of input characters is shown to the user (see figure 1a). In order to choose a character for input, a two-keystroke entry sequence is required. A first row of keys is provided horizontally and a second row is provided vertically. The user chooses from the set by selecting a key from the horizontal row and from the vertical row (not necessarily in that order) in order to obtain the selected input key to be output on the display (see figures 1b and 1c). However, the present invention's set of keys represents a selected row of characters that are a subset of the complete character set of QWERTY style

keyboard rows. Wang displays all of the available characters to the user rather than a selected subset. A user selects a row of characters from the complete set and the user chooses from that row an input selection. This teaches away from the present invention need to provide a keyboard in limited space, such as on the side of a handheld device. Wang could not perform this function as illustrated in the figures and by the matrix of character keys.

The present invention discloses that at least one key of a second set of keys is used to change a selected row from one subset to another subset that is associated with the QWERTY style. A user is able to change selected row of characters by actuating a key(s) to obtain the characters of choice. Wang discloses a method of using special characters, for instance shifting or changing case, by adding additional keys to the display area of the vertical group. That is, special characters are added to the matrix as shown in the in the display area along with the complete set of alphanumeric characters. Using extra keys on the horizontal and vertical sides of the display area, the special characters can be chosen. Wang does not disclose a set of keys used to shift the case of the characters associated with the character keys. Rather, Wang provides upper case letters as an addition to the complete set (rather than changing the characters from lower to upper case, for example, at the press of a button). Wang does not anticipate the change of case as disclosed in the present invention.

To be properly rejected under 35 U.S.C 102(b), each and every claim element must be shown in a single reference. Wang fails to provide or suggest at least the single row of characters chosen as a subset of a set of QWERTY style keyboard rows, a keyboard in limited space such as on the side of a handheld device, and a set of keys used to shift the case of the characters associated with the character keys, and therefore it is respectfully requested that the rejection be removed.

The examiner has rejected claims 15-19 under 35 U.S.C. § 102(b) as being anticipated by USP 5,128,672 (Kaehler), hereafter Kaehler. Kaehler discloses a keyboard that displays different characters in association with its various keys within a variety of predefined character set layouts. Each key represents only one character at a time and each character is displayed only at one key location. The user can manually change character set layouts on the keyboard. Organization of the characters within each character set is based upon the frequency of the characters being used. The keyboard can be implemented as a touch-sensitive display or images. Special functions keys can also be used in conjunction with the keyboard. A display is provided on the top of the device to show input characters.

Kaehler does not anticipate the compact keyboard input device for an electronic appliance as disclosed in the present invention. As shown in the amended claims, a requirement of the present invention is a single row (subset) of input characters based on a set of keyboard rows. Kaehler does not disclose the single row of characters necessary to provide the keyboard in a very limited space, e.g. the side of a cellular phone (see figure 1). Further, Kaehler fails to provide selection of a subset by a user, rather, the display of the character keys are based on the frequency of the use of each of the characters. Although Kaehler teaches the use of the selection keys on one or more of the side surfaces of an electronic device, Kaehler does not disclose the use of character keys (input keys) on one or more of the side surfaces. The input keys of Kaehler are provided on top of the device.

To be properly rejected under 35 U.S.C 102(b), each and every claim element must be shown in a single reference. Kaehler fails to provide or suggest at least a set of character input keys in a single row, a keyboard in limited space such as on the side of a handheld device, and one or more character keys and selection keys disposed on one or more side surfaces, and therefore it is respectfully requested that the rejection be removed.

REJECTIONS UNDER 35 U.S.C. § 103(a)

The examiner has rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of USP 5,818,361 (Acevedo), hereafter Acevedo. Acevedo describes a conventional keyboard with a plurality of display keys. Each display key has a liquid crystal display, light emitting diode, or other similar display situated thereon in order to depict alphanumeric characters and indicia. The keyboard is preferably used with a computer having associated software in order to assign the appropriate characters to the display keys.

Wang does not teach that the input keys comprise a character display and input mechanism. Although Acevedo teaches that the keys of the keyboard comprise an electronic character display and input mechanism, the device as disclosed is used as a conventional computer keyboard displaying all of the traditional QWERTY rows as well as numeric and control keys. The Acevedo keyboard is connected with a computer with associated software and renders those keys not associated with the software blank. Acevedo does not invite such combination in portable, compact, reduced character set entry system in an electronic device. As previously discussed, Wang does not disclose a set of keys in a single row that are a subset of a QWERTY style keyboard rows. Therefore, the combination of Wang and Acevedo would not produce the claimed elements.

The examiner has rejected claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of USP 5,841,374 (Abraham), hereafter Abraham. Abraham discusses a portable word processor microcomputer with keyboard options and a display screen. The keyboard preferably comprises toggle keys with each key capable of seven functions. Six of the keys are operated by the finger tips and the others by the user's thumbs. In an alternate embodiment, two keyboard options are hinged together with each keyboard having a single row

of six toggle keys moveable in six directions and a center depressable function. A plurality of keys are also located along the vertical edge adjacent the toggle keys. Preferably, the six toggle keys on each keyboard portion represent the functions of one half of a QWERTY computer keyboard. Thumb keys are provided along the edge of the device.

Wang does not teach the use of a first set of at least ten keys disposed on a top surface, nor a second set of keys disposed on one or more of the side surfaces. As previously discussed, Wang does not disclose a set of keys in a single row that are a subset of a QWERTY style keyboard rows, and uses a two-stroke selection method for choosing character keys. Further, Wang does not disclose a keyboard in limited space such as on the side of a handheld device.

The device as disclosed in Abraham does not provide a reduced set character entry as disclosed in the present invention. A set of at least ten keys are disposed on the top surface of the alternate embodiment; however, the characters associated with the keys are not a selected row of characters that are a subset of a complete character set of keyboard rows. Rather, Abraham provides toggle keys that pivot in any of six directions to make contact with one of six conductive contacts that are associated with a character key. A seventh character is associated with the depression of the toggle key. Also, Abraham does not disclose a method of changing the character set. Although thumb keys are provided on the side of the device, they do not provide the same control function(s), for example, changing the selected row of characters, as disclosed in the present invention. Also, the present invention allows for not only control keys but also a set(s) of character (input) keys to be on the side surface. Wang utilizes a two-keystroke sequence for character entry and Abraham utilizes a pivoting toggle key that contacts a conductor for inputting a character. Therefore, even if the combination was deemed proper, the combination of Wang and Abraham would not produce the claimed elements.

The examiner has rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of USP 5,812,117 (Moon), hereafter Moon. Moon describes a soft keyboard for inputting information. An information key region comprises information keys arranged in two lines or less and a scroll direction keys for scrolling through the input information. The soft keyboard is displayed on a display screen and includes an information key region and a scroll key region where one or more scroll direction keys are displaying for scrolling the information. A pen is used to touch a coordinate location to a corresponding and intended input key and a converter outputs the input to the screen.

The up-down left-right keys of Wang suggest the ability of moving between rows of characters; however, as previously discussed, Wang discloses a complete set of characters from a QWERTY style keyboard, i.e. a matrix of vertical rows and horizontal rows displaying the entire set of input characters is shown to the user. In order to choose a character for input, a two-keystroke entry sequence is required. A first row of keys is provided horizontally and a second row is provided vertically. The user chooses from the set by selecting a key from the horizontal row and from the vertical row (not necessarily in that order) in order to obtain the selected input key to be output on the display. However, the present invention's set of keys represents a selected row of characters that are a subset of the complete character set of QWERTY style keyboard rows. Wang displays all of the available characters to the user rather than a selected set.

Moon discloses scroll key regions for horizontally or vertically scrolling the available keys on the keyboard selection key regions. However, Moon does not disclose a single row of characters as displayed and chosen (as a subset) from a QWERTY style keyboard set. Rather, the keyboard of Moon is displayed in alphabetical and numerical order, and the user is able to scroll through the complete set for the input key of choice. Again, the present invention provides the

user with a subset of characters associated with a set of characters similar to a QWERTY keyboard in a single row. Therefore, the combination of Moon and Wang would not produce the claimed elements.

The examiner has rejected claims 8-13, 30, and 32 under 35 U.S.C. § 103(a) as being unpatentable over Kaehler. Kaehler discusses an electronic appliance comprising a housing with top, bottom, and side surfaces, a set of input keys on the top surface, at least one selection key, and a display. Kaehler does not teach that at least one selection key is located on one of the side surfaces. It would not have been obvious to place at least one selection key on one of the side surfaces of Kaehler. Kaehler also does not disclose a set of input keys comprising a single row of characters containing a subset of characters from a set of keyboard rows that can change a first subset of characters to a second subset of characters as disclosed in the present invention. Further, Kaehler does not disclose placing one or more input keys or a set of input keys on any of the side surfaces of the device. It would not have been obvious to place one or more input keys on one of the side surfaces of Kaehler. Because Kaehler does not teach at least one selection key being located on one of the side surfaces and input keys being located on a side surface, it would not have been obvious to place the selection key(s) and input keys on different ones of the side surfaces.

The examiner has rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Kaehler in view of Wang. As previously noted for claims 1, 2, and 6, Wang fails to provide or suggest at least the single row of characters chosen as a subset of a set of QWERTY style keyboard rows, a keyboard in limited space such as on the side of a handheld device, and a set of keys used to shift the case of the characters associated with the character keys. As noted for claims 8-13, 30, and 32, Kaehler fails to provide or suggest at least a set of character input keys in a single row, a keyboard in limited space such as on the side of a handheld device, and one or

more character keys and selection keys disposed on one or more side surfaces. Therefore, the combination of Kaehler and Wang would not produce the claimed invention.

The examiner has rejected claims 20-29, 31, and 33-35 under 35 U.S.C. § 103(a) as being unpatentable over USP 5,841,849 (Macor), hereafter Macor, in view of Kaehler. Macor discusses a personal telecommunication device, such as a portable phone or a wrist band, that allows a user to operate the device as a telephone or electronic messaging device with one finger by using virtual function keys and buttons. In order to choose a selected key, a trackball is maneuvered to the location of the selected key and depressed.

Macor does not teach that the display shows a selected set of input characters. Further, Macor does not disclose character keys or a flexible assembly having a set of character keys located thereon that is connected to the display. The input characters of Macor in both the wrist watch and portable phone are virtually displayed as a complete set rather than as a subset of a complete set as disclosed in the present invention (see figures 6 and 7). Further, Macor discloses the use of a trackball that is used to point to a virtual button of a keypad with a location indicator and selects the character by depressing the trackball. As previously noted, a requirement of the present invention is a single row of input characters based on keyboard rows, which is not disclosed in either Macor or Kaehler. Also, Macor does not show an input assembly that is externally attachable to a wrist watch or portable phone.

Macor does not disclose a flexible assembly that is pivotal from a position along and underneath the wristband to a position substantially perpendicular to the wristband or phone. Macor discloses a door comprising a display that is connected to the base member by way of a hinge that opens to a position substantially parallel with the wristband and base member or phone. Neither Macor nor Kaehler teaches that an electronic device, such as a portable phone, has input keys and at least one selection key located on one or more side surfaces. Further,

because neither Macor nor Kaehler teach the location of the keys on a side surface, it would not have been obvious to locate the input keys on the opposite side surface of a selection key(s).

The display that is rotated to be in an orientation appropriate for viewing by a user utilizing the input keys is not taught in Macor. Macor's display is rotated by a hinge on a base member to reveal the display and keys at the same time, that is, the display must be rotated on the hinge and the device "opened" in order to allow the user to use the device. In the present invention, however, the display is rotated in order to allow the user to use the row of input keys located on the side of the device comfortably.

Macor fails to disclose character keys or a flexible assembly having a set of character keys located thereon, a single row of input characters based on keyboard rows, an input assembly that is externally attachable to a wrist watch or portable phone, a flexible assembly that is pivotal from a parallel (for example, along and underneath the wristband) to a position substantially perpendicular, and display that is rotated to be in an orientation appropriate for viewing by a user. Kaehler fails to provide or suggest at least a set of character input keys in a single row, a keyboard in limited space such as on the side of a handheld device, and one or more character keys and selection keys disposed on one or more side surfaces. Also, by using a trackball, Macor teaches away from the present invention. Therefore, the combination of the system of Kaehler with Macor would not produce the claimed invention.

The examiner has rejected claim 36 under 35 U.S.C. § 103(a) as being unpatentable over Kaehler in view of USP 6,072,471 (Lo), hereafter Lo. Lo provides for an ambidextrous upright computer mouse. The mouse is symmetrical about a vertical transverse medial plane. The sets of buttons are alternately enabled and disabled by moving a selector switch, allowing for comprising feel and comfort for use with either hand. Kaehler does not teach the ability of switching between dominant hand modes. Although Lo teaches that dominant hand modes can

be selectively activated and disabled, Lo teaches the use of control keys on a computer mouse. Lo does not teach the use of a reduced character input system. The combination of the left-right switching mechanism of Lo with Kaehler would therefore not produce the claimed invention.

Summary:

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicants' presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

As this amendment has been timely filed within the set period of response, no petition for extension of time or associated fee is required. However, the Commissioner is hereby authorized to charge any deficiencies in the fees provided to Deposit Account No. 09-0441.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicants' representative at the below number.

Respectfully submitted,



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APPENDIX AIn the Specification

On page 5, lines 8-18 as follows:

Another attempt at solving the above difficulties is demonstrated by U.S. Patent No. 5,515,305 by Register et al. The PDA of Register has eight keys located on the back thereof. When the user grasps the PDA, each finger can contact a key. The input method of the keyboard of Register is a chordic style keyboard. While this allows a larger set of characters to be represented by fewer keys, allowing for the keys to be large enough for good ergonomic use and providing an overall smaller keyboard, chordic keyboards require a user to remember unique key combinations to input a character. To provide the same functionality as a standard keyboard such as those used with many present personal computers, a user must remember 101 different key combinations. In general, this is a significant amount of information for a user to remember in order to input characters to the electronic device and creates a significant learning barrier, especially as most users are used to actuating a single key to input a character. Hence, unlike the present invention, the chordic is a less natural means of inputting characters.

On page 12, lines 13-20 as follows:

Another embodiment allowing for an increased display area is shown in figure 2b. In the embodiment of figure 2b, the physical input keys **212a** and **212b** have been replaced with LCD displays and pressure sensors. By providing LCD displays with pressure sensors for the input keys **212a** and **212b**, visual feedback for the selected row is displayed directly on keys **212a** and **212b**. When control keys **210a** and **210b** are actuated to select the current row of keys, the LCD displays of keys **212a** and **212b** change to display the characters of the currently selected row

directly on the keys **212a**, **212b**. This allows for the area of display **204** previously utilized for displaying the selected row to be used exclusively for display of output information.

Beginning on page 13, line 9 as follows:

While described as implemented on a personal digital assistant, the present invention may also be advantageously utilized on small appliances, lab instruments, inventory control hand-held computers, tablet computers, e-mail only devices, etc. As shown in figures 3a and 3b, the keyboard is utilized as an I/O device for a wrist watch electronic device. Watch **300** has display **302** and wristband **304**. A flexible assembly **308** is provided with a row of character keys **306** and control keys **312** on the top surface thereof and is in a pivotal relationship to display **302** as illustrated in figure 3a. When not in use, flex assembly **308** is placed such that it extends along and underneath wristband **304**. When the I/O device is to be used for input, flex assembly **308** is pivoted from underneath wristband **304** to a position substantially perpendicular to wristband **304**, as illustrated in figure 3a. Flex assembly **308** is then laid across the back surface of a users hand **310** as shown in figure 3b and the opposite hand is utilized to actuate character keys **306** and control keys **312**. Display **302** provides visual feedback of the selected row and typed input. When a single flex assembly is used, a conventional QWERTY layout is implemented and a button is used to switch between representations of the left and right side of the QWERTY keyboard. Alternatively, different character switching schemes are utilized which differ from the traditional QWERTY layout for specific applications. For example, the character sequences can be optimized to prevent excessive movement through the character sets via use of the control key so as to help increase input speed. Alternatively, two flex assemblies are utilized, one rotating towards one side as previously described, while the other is rotated towards the opposite side. When the wristwatch is placed on a surface, input is accomplished using both hands. A

particular advantage of utilizing two flex assemblies is the emulation of a QWERTY style keyboard.

APPENDIX B

In the Claims

1. (once amended) A reduced set character entry system for an electronic appliance, said reduced set character entry system comprising:

a first set of ~~at~~ multiple keys, said first set of multiple keys representing a selected subset comprising a single row of characters from a set of QWERTY style keyboard rows, each of said keys associated with a character of said selected ~~row~~ subset such that when any of said first set of multiple keys is actuated said associated character is input to said electronic appliance;

a second set of keys, at least one of said second set of keys actuated to change said selected row, and

an electronic appliance display, said display displaying the characters of said selected row.

8. (once amended) An electronic appliance including a housing having top and bottom surfaces and a plurality of side surfaces connecting said top and bottom surfaces, said electronic appliance comprising:

a first set of input keys located on said top surface, said set comprising a single row of characters, wherein each of said input keys is associated with an individual character of a first subset of a set of input characters, said subset comprising a row of characters from a set of keyboard rows, and actuation of any of said input keys causing the character associated with said actuated input key to be input to said electronic appliance;

at least one selection key located on one of said side surfaces;

a display located on said top surface, said display displaying said first subset of input characters, and

wherein actuation of said selection key changes said first subset to a second subset so that each of said input keys is associated with an individual character of said second subset and said display is changed to display said second subset.

15. (once amended) A compact keyboard input device for an electronic appliance, said input device comprising:

a set of character input keys, said set less in number than an input character set and displayed in a single row, each of said keys comprising an electronic character display and corresponding input mechanism;

each of said displays displaying an individual character of said input character set associated with said display, actuation of said corresponding input mechanism causing said displayed character to be input to said electronic appliance;

at least one selection key, and

wherein actuation of said selection key causes each of said displays to display a different individual character of said input character set.

20. (once amended) An electronic appliance having an input/output device, said appliance comprising:

a display, said display displaying a selected set of input characters;

a wrist band connected to said display for securing said display to the wrist of a user;

a flexible assembly operatively connected to said display;

said flexible assembly having a set of character keys located thereon, each of said character keys associated with an individual character of said selected set of input characters and at least one control key, wherein said selected set of input characters comprises a single row of characters from a set of keyboard rows, and

wherein actuation of any of said characters keys causes the character associated with said actuated key to be input into said device and actuation of said control key causes said currently selected set of input characters to be changed to a different set of input characters.

23. (once amended) A portable phone including a housing having top and bottom surfaces and a plurality of side surfaces connecting said top and bottom surfaces and a reduced set character entry system, said portable phone comprising:

a display located on said top surface;

an input assembly operatively connected to said portable phone;

said input assembly having a set of character keys located thereon, each of said character keys associated with an individual character of a selected set of input characters, said selected set comprising a single row of characters from a set of keyboard rows, and at least one control key, and

wherein actuation of any of said characters keys causes the character associated with said actuated key to be input into said device and actuation of said control key causes said currently selected set of input characters to be changed to a different set of input characters.

27. (once amended) An electronic appliance including a housing having top and bottom surfaces and a plurality of side surfaces connecting said top and bottom surfaces and a reduced set character entry system, said electronic appliance comprising:

an input assembly integrally connected to said electronic appliance;

said input assembly having a set of character keys located thereon, each of said character keys associated with an individual character of a selected set of input characters, said selected set comprising a single row of characters from a set of keyboard rows, and at least one control key;

said input assembly positionable in a first position where said input assembly is substantially enclosed within said housing;

said input assembly positionable in a second position where said character keys and said control key are exposed for actuation;-

wherein upon positioning said input assembly in said second position, actuation of any of said character keys causes the character associated with said actuated key to be input into said device and actuation of said control key causes said currently selected set of input characters to be changed to a different set of input characters.

30. (once amended) An electronic appliance including a housing having top and bottom surfaces and a plurality of side surfaces connecting said top and bottom surfaces and a reduced set character entry system, said electronic appliance comprising:

a first set of input keys located on ~~a~~ any of said side surfaces, said set of input keys arranged in a single row, each of said input keys associated with an individual character of a first subset of a set of input characters, said set of input characters comprising a row from a set of keyboard rows, and actuation of any of said input keys causing the character associated with said actuated input key to be input to said electronic appliance;

at least one selection key located on any of said side surfaces, and

wherein actuation of said selection key changes said first subset to a second subset
so that each of said input keys is associated with an individual character of said second subset,-
~~and said display is changed to display said second subset.~~

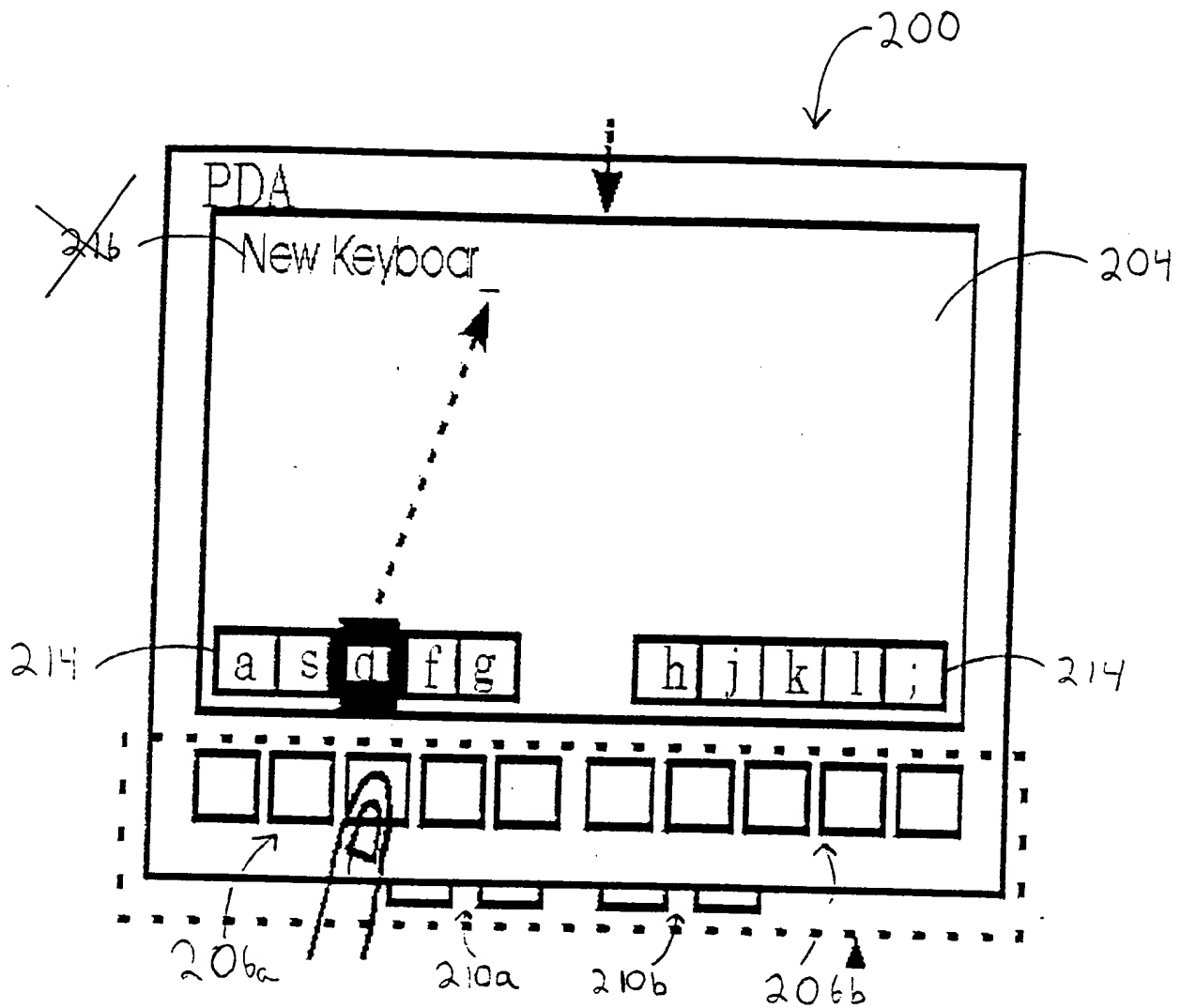


Figure 2a